REMARKS

Claims 1, 10 - 11, 33, 34, 43 - 45, 48, 50, 52, 54 and 56 - 57 are pending. No claims have been amended, claims 8, 9, 46 and 58 are canceled herein. Claims 2-7, 12-32, 25-42, 47, 49, 51, 53, and 55 were previously canceled. No claims have been added by this amendment. Applicants submit that no new matter is added herein.

At the outset, the Examiner indicates that the claim indicator for claim 2 is incorrect and should be identified as canceled. Applicants submit that a revised version of the claims with the correct claim identifier for claim 2 was submitted on March 9, 2005. Accordingly, Applicants submit the claim indicator for claim 2 is accurate.

Rejections under 35 USC §112

The Examiner rejected claims 8, 9 under 35 U.S.C. §112, second paragraph, as indefinite. Specifically, the Examiner indicates the term "complex" at line 2 of claim 8 is indefinite. Claims 8 and 9 have been canceled herein. Accordingly, the current rejection as applied to claims 8 and 9 has been rendered moot.

The Examiner rejected claim 54 under 35 U.S.C. §112, second paragraph, as indefinite Specifically, the Examiner indicates that the term "concentrate" in the penultimate line of claim 54 is indefinite. Applicants have now amended claim 54 to delete the term "concentrate" in the penultimate line of that claim. Accordingly, Applicants respectfully submit that this rejection has been overcome, and respectfully request the Examiner to withdraw the rejection.

Claims 45 and 56 were rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. Specifically, the Examiner does not find support for the negative limitation in these claims. The Examiner cites that at page 24 of the present specification, strong chelating agents are recited.

Applicants respectfully disagree with the Examiner's rejection. One embodiment of the present invention does not include strong chelating agents. While Applicants understand that the Examiner has identified the complexing agents listed on page 24 as strong chelating agents, Applicants submit that claim 45 does not recite the composition is free of all complexing agents;

claim 45 merely recites the composition is free of thiazolinone and is free of a strong chelating agent. Absence of a strong chelating agent does not preclude the presence of any other chelating agents, which may be disclosed in the present specification. Accordingly, Applicants submit that the present rejection is untenable and respectfully request the Examiner to withdraw the rejection.

Rejections under 35 USC §102

Claims 1, 11, 33, 34, 43, 45, 46, 48, 50, 52, and 56-58 are rejected under 35 USC §102(b) as being anticipated by U.S. Patent No. 6,017,502 to Kaufman, et al. Applicants respectfully disagree with the Examiner.

Kaufman, et al. was filed on February 28, 1998 and was issued and published as a U.S. Patent on January 25, 2000. The present application was filed on June 22, 2000 and claims the benefit of a provisional application filed on June 25, 1999. Applicants respectfully submit that Kaufman, et al. is not a proper reference under 35 USC §102(b) as Kaufman, et al. was not published more than one year before the date of the filing date of the present application. Accordingly, Applicants submit the Examiner has failed to meet the required elements in establishing a prima facie case of anticipation under 35 USC §102(b). However, to further respond to this rejection, Applicants respectfully assert that the rejection is tenable, and offer the following additional comments.

Kaufman, et al. discloses a solution to the problem of producing pyrithione salt particles in forms other than platelet or spherical form, such as rods, needles, cylinders, cones, ellipsoids, prisms, parallelepipeds, pyramids, cubes and the like. Kaufman, et al. solved this problem utilizing selected dispersants or a combination of dispersant and surfactants, and a range of flow processing temperatures which promote the formation of non-platelet forms of pyrithione salt particles. (See col. 3, lines 34-43).

In contrast, one aspect of the claimed invention, as recited in claim 1, relates to an antimicrobial composition concentrate including a zinc or copper or silver source and a pyrithione or pyrithione complex. The weight ratio of the zinc or copper or silver source to the

pyrithione complex is in the range from 1:300 to 50:1. Other aspects of the present invention recited in other independent claims also focus upon antimicrobial composition concentrates.

Applicants submit that Kaufman, et al. does not disclose or suggest an antimicrobial composition concentrate that has an enhanced biocidal effect against microorganisms. Applicants further submit that the non-platelet forms of pyrithione salt particles disclosed by Kaufman, et al. neither inherently disclose nor suggest an antimicrobial composition concentrate as instantly claimed. While Applicants agree that Kaufman, et al. discloses the combination of a water-soluble salt of pyrithione and a water-soluble salt of a selected polyvalent metal, such as zinc or copper, Applicants respectfully submit that Kaufman, et al. does not suggest using such combination in an antimicrobial composition concentrate. Accordingly, Applicants submit the Examiner is improperly using hindsight to apply Kaufman, et al. to the presently claimed invention. Accordingly, withdrawal of the present rejection is respectfully requested.

Claims 1, 8, 11, 44, 48, 54 and 58 are rejected under 35 USC §102(b) as anticipated by, or in the alternative, rendered obvious under 35 USC §103(a) over EP 077630 to Dixon, et al. Applicants respectfully disagree with the Examiner.

Dixon, et al. discloses a topical antimicrobial composition having an aqueous or detergent solution of a pyridinethione salt or pyridinethione disulphide, a strong chelating agent and from 0.007 to 1.5% w/w of divalent copper cations. The specification of Dixon, et al states that the antimicrobial effect of dissolved pyridinethione (pyrithione) in topical antimicrobial formulations is enhanced by including a strong chelating agent and divalent copper cations in the formulation.

Claim 1 of the present application is directed to an antimicrobial composition concentrate which includes pyrithione or a pyrithione complex, a zinc or copper or silver source, where the weight ratio of the zinc or copper or silver source to the pyrithione or pyrithione complex is in the range of from 1:300 to 50:1. Applicants submit Dixon, et al. neither discloses nor suggests mentions the weight ratio of a metal source to the pyridinethione source. Accordingly, Applicants submit that Dixon, et al. neither anticipates nor renders obvious claim 1, or any claims dependent therefrom.

Claim 8 has been canceled herein, accordingly the rejection as applied to claim 8 is now rendered moot.

Claim 44, and likewise, claim 54, are directed to an antimicrobial composition that includes a silver source. Dixon, et al. does not disclose or suggest an antimicrobial composition that includes a silver source. In contrast, Dixon, et al. discloses the use of soluble pyridinethione salts, such as sodium pyridinethione, as well as insoluble pyridinethione salts, such as zinc pyrithione. The examples recited in Dixon, et al. do not show or suggest the use of any pyridinethione besides zinc pyrithione or sodium pyrithione. Applicants submit that one of ordinary skill in the art, taking Dixon as a whole, would not substitute silver for zinc or sodium. Accordingly, Dixon, et al. does not disclose or suggest the antimicrobial composition concentrate recited in claim 44 or 54.

Claim 58 has been canceled herein. Accordingly, the rejection as applied to claim 58 has been rendered moot and should be withdrawn.

Rejections under 35 USC §103

Claims 1, 8-11, 33, 34, 43, 46, 48, 50, 52, 54, 57 and 58 are rejected under 35 USC §103(a) as being unpatentable over U.S. Patent No. 5,518,774 to Kappock, et al. Applicants respectfully disagree with the Examiner.

Kappock, et al. discloses pyrithione-containing coating compositions exhibiting a combination of in-can preservation against microbial attack plus antimicrobial efficacy of the dry film resulting from the use of the coating composition on a substrate. One embodiment of the coating composition disclosed by Kappock, et al. requires a base medium, such as a polymer latex. As previously noted by Applicants, Kappock, et al. generally discloses a zinc compound-containing and pyrithione salt-containing compound having a molar range of ratios of pyrithione salt to zinc compound between about 1:10 and about 10:1. (See col. 3, lines 12-20). However, Kappock, et al. does not disclose the instantly claimed weight ratios.

In contrast to Kappock, et al. claims 1, 10, 11, 48 and 57 of the present application are directed to an antimicrobial composition concentrate which includes pyrithione or a pyrithione

complex, a zinc or copper or silver source, where the weight ratio of the zinc or copper or silver source to the pyrithione or pyrithione complex is in the range of from 1:300 to 50:1. The antimicrobial concentrates can be diluted in a working fluid as recited in claim 1 and discussed in more detail on pages 27-28 of the present specification. Such working fluids include fuels, metal working fluids, engine fluids, paints, coatings, and the like. Applicants submit the coating compositions disclosed in Kappock, et al. do not teach or suggest the antimicrobial composition concentrate of the present invention. Furthermore, the Applicants submit the Example 1 of Kappock, et al. would not teach or suggest to one of ordinary skill in the art how to make the antimicrobial composition concentrate of the present invention since Example 1 shows a procedure to make Acrylic Latex Paint preparation of the Latex using a mill base, pigment grind and let down. Likewise, Example 2 of Kappock, et al. would not teach or suggest to one of ordinary skill in the art how to make the antimicrobial composition concentrate of the present invention since Example 2 shows sodium pyrithione efficacy as an "in-can" preservative. Since this reference teaches neither an antimicrobial composition concentrate nor suggests making or using an antimicrobial composition concentrate using the aqueous coating composition disclosed therein, Applicants submit the present rejection as applied to claims 1, 10, 11, 48 and 57 has been overcome and respectfully request the Examiner to withdraw the rejection.

Claims 8, 9, 46 and 58 have been canceled herein. Accordingly, the rejection as applied to claims 8, 9, 46 and 58 has been rendered moot.

Claims 33 and 34 are directed to an antimicrobial composition concentrate that includes a salt of pyrithione and a water soluble zinc metal salt, where the weight ration of the water-soluble zinc metal salt to the salt of pyrithione is in the range from 1:100 to 1:10. As discussed in more detail above, Kappock, et al. discloses an aqueous coating composition that contains a zinc compound and a pyrithione salt. In one embodiment of the coating composition disclosed in Kappock, et al., the coating composition contains a base medium, such as a polymer latex. Since this reference teaches neither an antimicrobial composition concentrate nor suggests making or using an antimicrobial composition concentrate using the aqueous coating composition disclosed therein, Applicants submit the present rejection as applied to claims 33 and 34 of the present

invention. Accordingly, Applicants respectfully request the Examiner withdraw the current rejection.

Likewise, claim 43 is directed to an antimicrobial composition concentrate that includes pyrithione or a pyrithione complex, and zinc from a zinc source wherein the weight ratio of the zinc source to the pyrithione or pyrithione complex is in the range from 50:1 to 1:50. The claimed antimicrobial composition concentrate has an enhanced biocidal effect against microorganisms. Kappock, et al. neither discloses or suggests the claimed weight ratio nor teaches an antimicrobial composition concentrate nor suggests making or using an antimicrobial composition concentrate using the aqueous coating composition disclosed therein, Applicants submit the present rejection as applied to claim 43.

Claim 50 is directed to an antimicrobial composition concentrate which includes a salt of pyrithione and a water soluble zinc metal salt, where the weight ratio of the water-soluble zinc metal salt to the salt of pyrithione is in the rang from 50:1 to 1:50. The antimicrobial composition recited in claim 50 is diluted in a working fluid at a dilution ratio of the concentrate to the working fluid of between about 1:10 and about 1:100. Furthermore, the antimicrobial composition concentrate additionally includes water or an organic solvent, such as alkanolamine.

Kappock, et al. has been discussed in more detail above. Applicants submit that Kappock, et al. does not disclose or suggest the weight ratios recited in claim 50, nor does Kappock, et al. disclose or suggest the addition of water or an organic solvent to an antimicrobial composition concentrate. While Applicants agree that Kappock, et al. generally discloses adding sodium pyrithione, zinc oxide, water, and other compounds to form a paint, Kappock, et al. does not discloses the addition of an antimicrobial composition concentrate having the components and weight ratios claimed herein to a working fluid. Accordingly, Applicants submit this rejection has been overcome and respectfully request the Examiner withdraw the rejection.

Claim 52 is directed to an antimicrobial composition concentrate which contains a pyrithione or a pyrithione complex and a zinc source where the weight ration of the zinc source to the pyrithione or pyrithione complex is in the range from 50:1 to 1:50. The antimicrobial composition concentrate additionally includes water or an organic solvent, such as alkanolamine.

Kappock, et al. has been discussed in more detail above. Applicants submit that Kappock, et al. does not disclose or suggest the weight ratios recited in claim 52, nor does Kappock, et al. disclose or suggest the addition of water or an organic solvent such as alkanolamine. Applicants further submit that it would not be obvious to one of ordinary skill in the art to add the organic solvent to the coating composition of Kappock, et al. to make the antimicrobial composition concentrate of the claimed invention. Accordingly, Applicants submit this rejection should be withdrawn.

Claim 54 is directed to an antimicrobial composition which includes pyrithione or a pyrithione complex and a silver source where the weight ratio of the silver source to the pyrithione or pyrithione complex is in the range from about 1:100 to about 1:10. Kappock, et al. is discussed in more detail above. Kappock, et al. does not disclose or suggest an antimicrobial composition having a silver source and a pyrithione or a pyrithione complex having the recited weight ratio. Accordingly, Applicants submit this rejection should be withdrawn.

Accordingly, Applicants submit that none of the references, alone or in combination, anticipate or make obvious the invention as presently claimed and that the application is now in condition for allowance. Therefore, Applicants respectfully request reconsideration and further examination of the application and the Examiner is respectfully requested to take such proper actions so that a patent will issue herefrom as soon as possible.

Additional 35 USC §102(b) or, in the alternative, 35 USC §103(a) rejections

Claims 33, 34, 43, 46, 48, 50, 52, 54, 57, and 58 stand rejected under 35 USC 102(b) as allegedly anticipated by Wiese. However, Wiese does not disclose or suggest any antimicrobial concentrates, much less the instantly claimed dilution range. Claim 44 has been limited to silver as the metal. Wiese neither discloses nor suggests the use of silver in patentee's composition. Further, the Abstract of Wiese speaks to the activity of a thiazolinone preservative. Accordingly, Wiese does not disclose or suggest a composition that is free of that preservative as claimed in instant claim 45. Accordingly, the rejection is untenable and should be withdrawn.

Claims 1, 8-11, 45-46 are rejected under 35 U.S.C. 102(b) over Nagata. The reference discloses aqueous and crown ether antimicrobial compositions. It does not disclose or suggest

concentrates in the context of the instantly claimed range of dilution ratios. Accordingly, this rejection is untenable and should be withdrawn.

Reconsideration of the claims as amended, and an early allowance thereof, is respectfully requested. If the Examiner has any questions or believes that a discussion with Applicants' attorney would expedite prosecution, the Examiner is invited and encouraged to contact the undersigned at the telephone number below.

Please apply any credits or charge any deficiencies to our Deposit Account No. 23-1665.

Respectfully submitted,
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